

ALASKA'S OIL & GAS INDUSTRY

Overview & Activity Update

Commonwealth North

Presented by:

**Mark Wiggin, Deputy Commissioner
Alaska Department of Natural Resources**

June 9, 2017



OIL AND GAS DIVISION

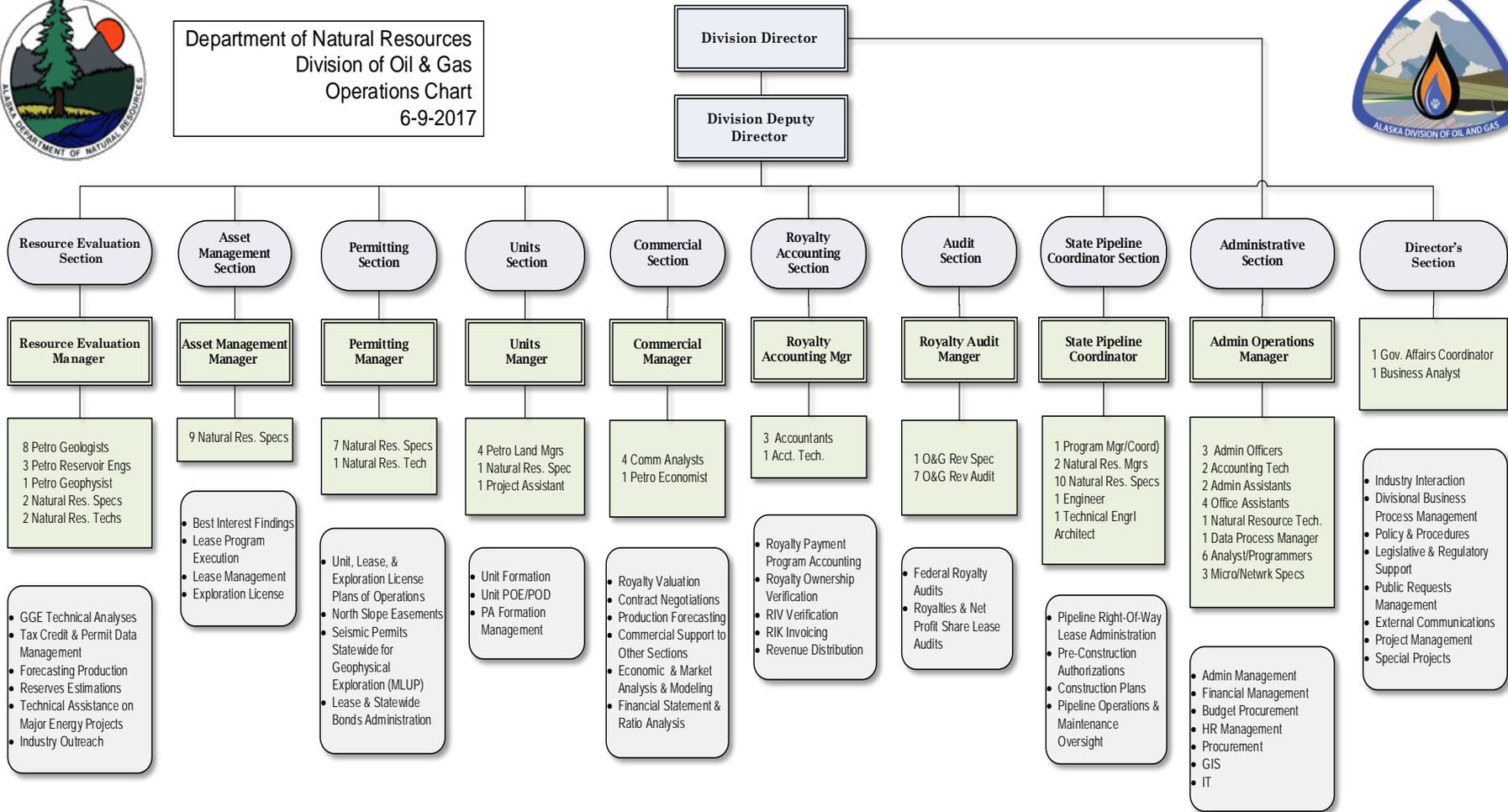
- **Cross disciplinary team:**
 - Scientists
 - Engineers
 - Land managers
 - Economists

- **Manages 24.7 million acres of world class resources:**
 - Beaufort Sea
 - North Slope
 - North Slope Foothills
 - Cook Inlet
 - Alaska Peninsula

- **Over 4 million acres under lease**



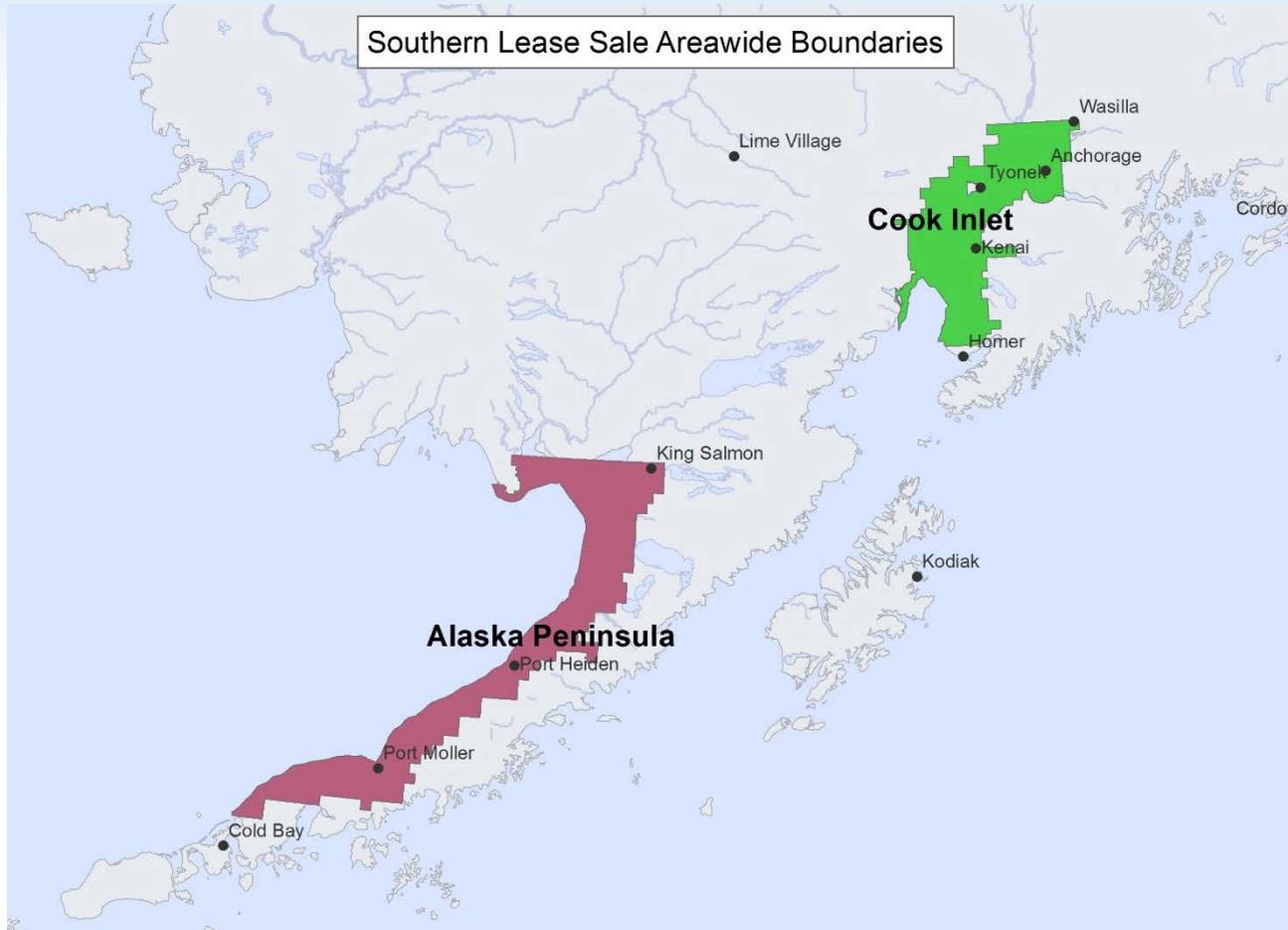
Department of Natural Resources
 Division of Oil & Gas
 Operations Chart
 6-9-2017



OVERVIEW

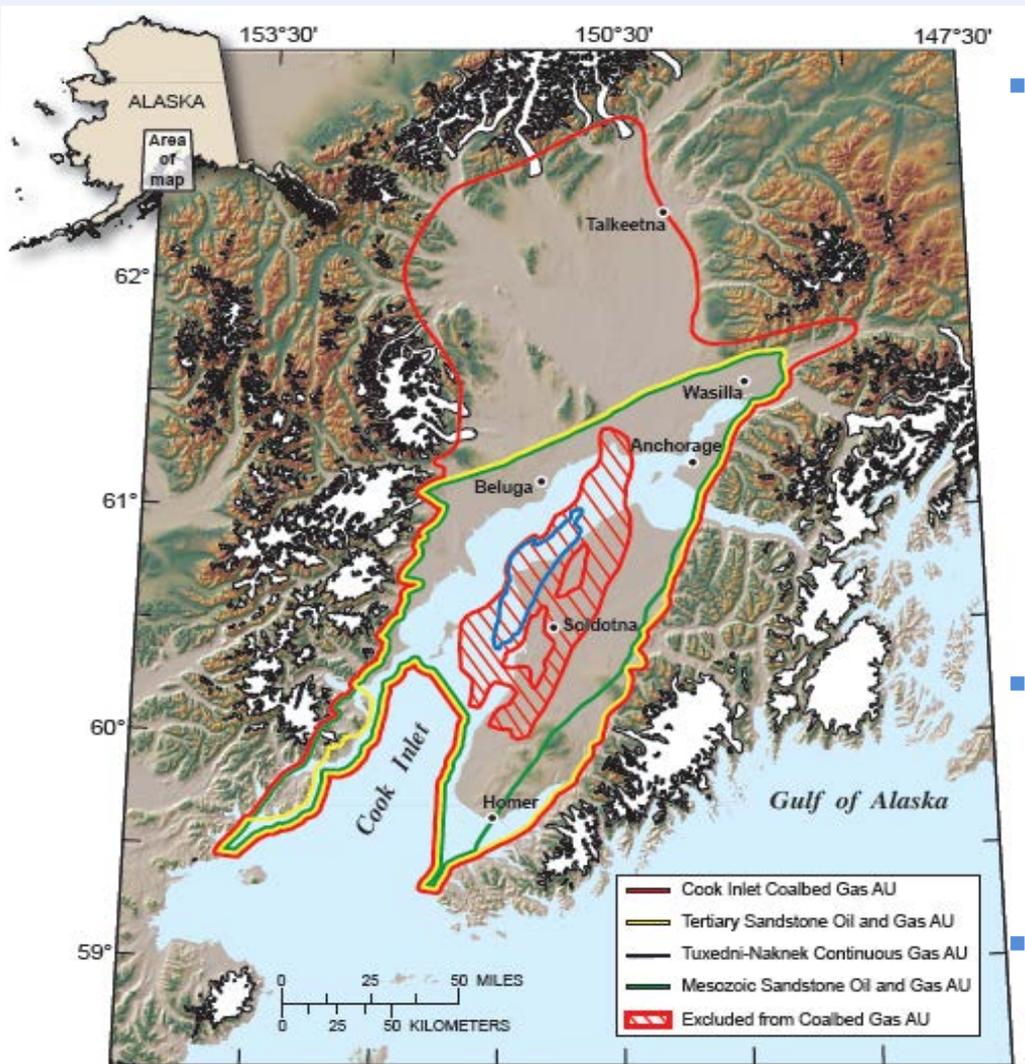
- **Cook Inlet and Frontier Basins:**
 - Resources and Reserves
 - Current Activity & New Developments
 - Leasing Activity or Exploration Licensing & Lease Conversion

SOUTHERN LEASE SALES



- **Spring 2016:**
No bids received

COOK INLET RESOURCE & RESERVES OVERVIEW



- **Undiscovered, Technically Recoverable Oil & Gas (USGS, 2011):**
 - mean conventional oil 599 MMBO
 - mean conventional gas 13.7 TCF
 - mean unconventional gas 5.3 TCF

- **Natural Gas Reserves (ADNR 2015)**
1.18 TCF (Proved + Probable)

- 1.2 TCF additional mean resource assessed in OCS waters (BOEM, 2011)

COOK INLET

CURRENT ACTIVITY & NEW DEVELOPMENTS

- **Conoco Phillips**
 - Sale of Gas Plant
 - Transferred North Cook Inlet Unit to Hilcorp
- **Furie Operating Alaska**
 - Kitchen Lights Unit:
- **BlueCrest Energy, Inc.**
 - Cosmo Unit: Restarted production March 2016; plans to drill up to 3 wells
- **Cook Inlet Energy**
 - Continued production from North Fork, Redoubt, and West McArthur River Units

COOK INLET

CURRENT ACTIVITY & NEW DEVELOPMENTS

■ Hilcorp Alaska, LLC:

- 13 State managed units in Cook Inlet
- Cannery Loop Unit:
 - Completed 1 workover in 2016, plan 1 workover and one sidetrack in 2017
- Deep Creek Unit:
 - Stratigraphic test wells planned for 2017
- Granite Point Unit:
 - Plan 3 side tracks
- Ninilchik Unit:
 - Drilled two new gas wells in 2016 and plan 1 additional in 2017
- Trading Bay Unit:
 - 11 workover jobs and 4 sidetracks in 2016, 4 more sidetracks and 3 new wells in 2017

COOK INLET

WELLS DRILLED & SEISMIC ACQUIRED

- **New Exploration & Development Wells Drilled 2010-2014**
 - 24 Exploratory Wells and Well Branches
 - 65 Development & Service Wells and Well Branches

- **2D & 3D Seismic Data Acquired (Tax Credit Data) 2004-2014**
 - Line Miles 2D (onshore/offshore) ~ 725
 - Square Miles 3D (onshore/offshore) ~ 660

COOK INLET

RECENTLY ISSUED SEISMIC PERMITS

- **Global South Kenai 2D**
 - Requested 50 linear miles
- **SAE Shadura 3D and 2D**
 - Requested 16 square miles
 - Requested 42 linear miles
- **SAE Lower Cook Inlet 3D Marine (2015)**
 - Requested 547.8 square miles
- **SAE Upper Cook Inlet 3D (2015)**
 - Requested 821 square miles

WHO'S WORKING COOK INLET?

- **Mid-Sized Independents:**

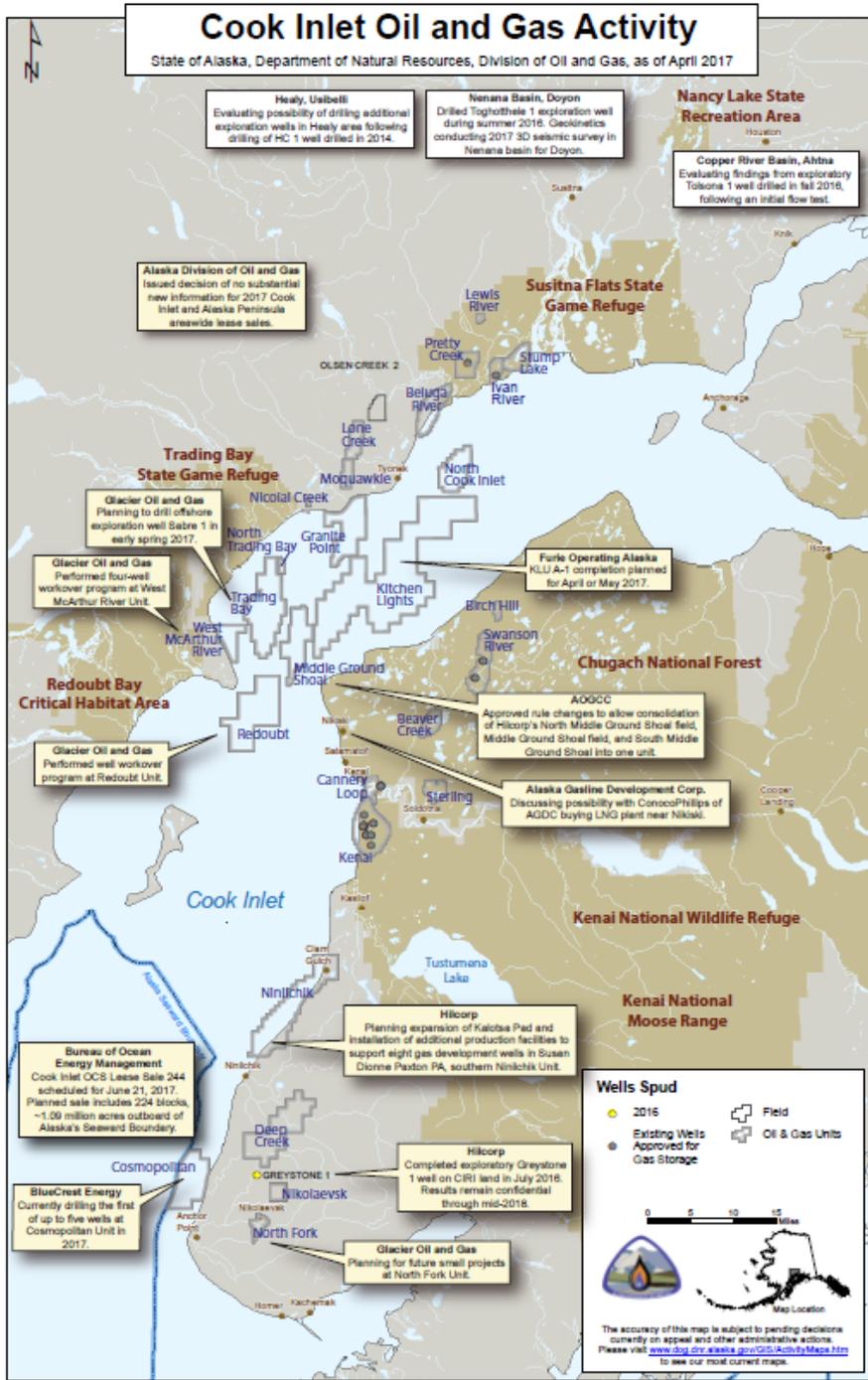
- Hilcorp Alaska, LLC

- **Small Independents & LLCs:**

- AIX Energy LLC
- Aurora Exploration, LLC
- BlueCrest Energy Inc.
- CIRI Production Company
- Chugach Electric Association
- Cook Inlet Energy LLC
- Cornucopia Oil & Gas Company LLC
- Corsair Oil & Gas Company LLC
- Furie Operating Alaska LLC
- Municipality of Anchorage dba
Municipal Light and Power
- NordAq Energy LLC
- Taylor Minerals LLC
- Woodstone Resources, LLC

Cook Inlet Oil and Gas Activity

State of Alaska, Department of Natural Resources, Division of Oil and Gas, as of April 2017



Healy, Usibelli
Evaluating possibility of drilling additional exploration wells in Healy area following drilling of HC 1 well drilled in 2014.

Nenana Basin, Doyon
Drilled Tighthead 1 exploration well during summer 2016. Geokinetics conducting 2017 3D seismic survey in Nenana basin for Doyon.

Nancy Lake State Recreation Area
Copper River Basin, Ahinsa
Evaluating findings from exploratory Tokona 1 well drilled in fall 2016, following an initial flow test.

Alaska Division of Oil and Gas
Issued decision of no substantial new information for 2017 Cook Inlet and Alaska Peninsula areawide lease sales.

Trading Bay State Game Refuge
Glacier Oil and Gas
Planning to drill offshore exploration well Sabre 1 in early spring 2017.

Glacier Oil and Gas
Performed four-well workover program at West McArthur River Unit.

Redoubt Bay Critical Habitat Area
Glacier Oil and Gas
Performed well workover program at Redoubt Unit.

Furie Operating Alaska
KLU A-1 completion planned for April or May 2017.

Chugach National Forest
AOGCC
Approved rule changes to allow consolidation of Hilcorp's North Middle Ground Shoal field, Middle Ground Shoal field, and South Middle Ground Shoal into one unit.

Alaska Gasline Development Corp.
Discussing possibility with ConocoPhillips of AGDC buying LNG plant near Nikiski.

Bureau of Ocean Energy Management
Cook Inlet OCS Lease Sale 244 scheduled for June 21, 2017. Planned sale includes 224 blocks, ~1.06 million acres outboard of Alaska's Seaward Boundary.

BlueCrest Energy
Currently drilling the first of up to five wells at Cosmopolitan Unit in 2017.

Hilcorp
Planning expansion of Kalobaa Pad and installation of additional production facilities to support eight gas development wells in Susan Dierne Paxton PA, southern Ninilchik Unit.

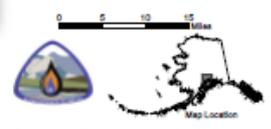
Hilcorp
Completed exploratory Greystone 1 well on CRI land in July 2016. Results remain confidential through mid-2016.

Glacier Oil and Gas
Planning for future small projects at North Fork Unit.

Wells Spud

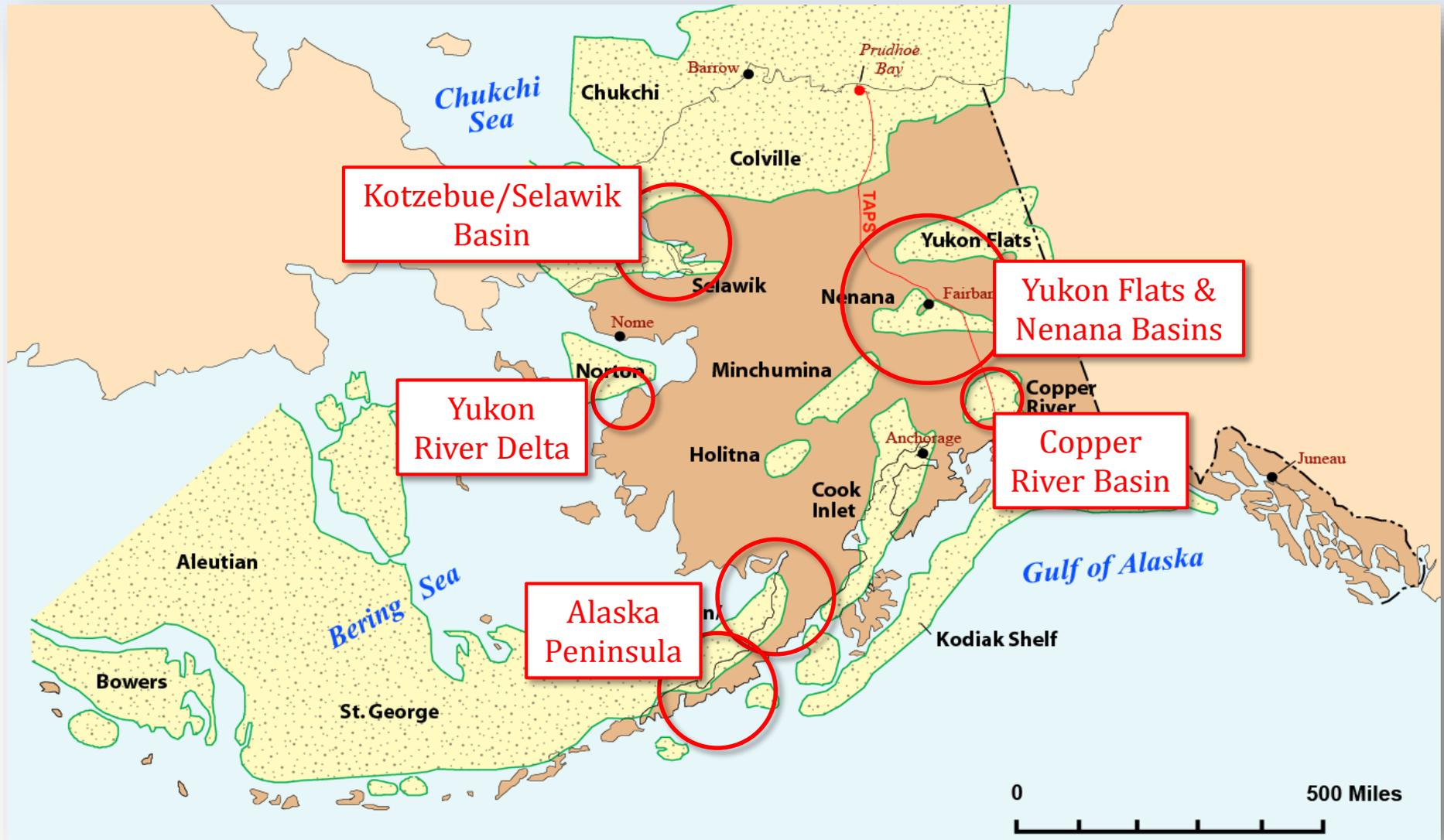
- 2016
- Existing Wells
- Approved for Gas Storage

Field (white outline)
Oil & Gas Units (white outline)



The accuracy of this map is subject to pending decisions currently on appeal and other administrative actions. Please visit www.dnr.state.ak.us/GIS/ActivityMaps.htm to see our most current maps.

FRONTIER BASINS TAX CREDIT AREAS



STATEWIDE RESOURCE ASSESSMENTS

- UNDISCOVERED, TECHNICALLY RECOVERABLE RESOURCE -

Region	Mean Oil Estimate (Million Barrels)	Mean Gas Estimate (Billion Cubic Feet)
Interior Basins (only partially assessed)	234	5,641
<div style="border: 1px solid red; padding: 5px; color: red;"> Includes Yukon Flats and Kandik basins (Nenana, Kotzebue, Copper River, Holitna, & Susitna basins not assessed) </div>		
Upper Cook Inlet	599	19,037
Other Southern Alaska	2,859	23,458
<div style="border: 1px solid red; padding: 5px; color: red;"> Mainly federal OCS waters, minor AK Peninsula onshore </div>		
TOTAL	2.8 BBO	48.1 TCF

EXPLORATION LICENSE PROGRAM

- DNR accepts proposals for exploration activity outside existing leasing areas (April)
- Supplemental to the state's oil and gas leasing efforts
- Encourages exploration outside of known oil & gas provinces
- DNR may request proposals to explore a designated area (encourages competition)
- Applicant have up to 90 days to submit proposal
- Three exploration licenses have been converted to lease: Susitna II, Copper River, & Nenana

WHO'S WORKING THE FRONTIER BASINS?

■ Ahtna

- Copper River Basin, Tolsona Exploration License:
 - Reprocessed 2D seismic data & acquired new Tolsona 2D seismic in spring 2014
 - Plan to drill Tolsona #1 gas exploration well in early 2016; follow up to the Ahtna #1-19 well drilled in 2007-2009 (Rutter & Wilbanks)

■ Doyon

- Nenana Basin:
 - Drilled Nunivak #1 and #2 exploratory wells, 2009-2013
 - Acquired 2D and 3D seismic, gravity, magnetics, and lakebed geochemical surveys, 2005 - 2014
 - Converted exploration license to leases between 2013 & 2014
 - Additional 2D/3D seismic completed
 - Toghothele #1 drilled in 2016
 - Application to drill Tokchaket No. 1 well winter 2018

WHO'S WORKING THE FRONTIER BASINS?

■ **Doyon**

- Yukon Flats Basin:
 - Acquired 2D seismic, gravity, magnetics, and lakebed geochemical surveys

■ **NANA**

- Kotzebue Basin:
 - Evaluating and marketing prospects based on legacy industry seismic

■ **Usibelli Coal Mine Inc.**

- Healy Basin Gas-Only Exploration License:
 - Drilled one well in 2014

FRONTIER BASINS WELLS DRILLED & SEISMIC ACQUIRED

- **New Exploration Wells Drilled 2004-2014**
 - 7 Exploratory Wells and Well Branches

- **2D & 3D Seismic Data Acquired (Tax Credit Data) 2004-2014**
 - Line Miles 2D (onshore) ~ 1,220
 - Square Miles 3D (onshore) ~ 340